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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/610,960

06/30/2003

Ramin Shahidi

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EXAMINER

BOR, HELENE CATHERINE

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

04/16/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/610,960	<b>Applicant(s)</b> SHAHIDI, RAMIN	
	<b>Examiner</b> HELENE BOR	<b>Art Unit</b> 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 10-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 10-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glassman et al. (US Patent No. 5,299,288) and further in view of Schweikard et al. (US Patent No. 6,144,875).

**Claim 10-21:** The rejection of claims 10-21 is hereby maintained for the reasons of record. The newly added claims are addressed below.

**Claim 22:** Glassman teaches a surgical instrument moving sidewides (Figure 1). However, Glassman fails to teach the instrument correction. However, Schweikard teaches wherein correcting the orientation of the tracked first instrument comprises directing the surgical instrument to the target site (Col. 6, Line 39-44) in order to greatly improve the efficacy of treatment (Col. 7, Line 8-11).

**Claim 23:** Glassman fails to teach the instrument correction. However, Schweikard teaches wherein the tracked first instrument has a first orientation before the target site moves off the tracked first instrument's trajectory, wherein the tracked first instrument has a second orientation after the correction of the orientation of the tracked first instrument (Col. 6, Line 39-44) in order to greatly improve the efficacy of treatment (Col. 7, Line 8-11).

**Claim 24-26 & 29:** Glassman fails to teach a real-time system. Schweikard teaches wherein correlating the image coordinate system with the instrument coordinate system

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comprises correlating in real time the image coordinate system with the instrument coordinate system (Col. 4, 64 – Col. 5, Line 3) in order to greatly improve the efficacy of treatment (Col. 7, Line 8-11).

**Claim 27:** Glassman teaches wherein the force contact sensor is for providing feedback to allow the tracked first instrument to apply the constant pressure upon the tissue surface of the patient's body (Col. 2, Line 40-41).

**Claim 28:** Glassman teaches a robotic surgical system that includes a manipulator arm having a surgical tool coupled with a force sensor. The arm is coupled to a controller for controllably positioning the surgical tool within a three dimensional coordinate system. The system further includes an apparatus for determining the position of the surgical tool in the three dimensional coordinate system relative to a volumetric model (Col. 2, Line 22-49 & Figure 1, Elements 32, 38, 24, 28 & 22). Glassman teaches determining if the target site has moved and if movement is detected suspends movement of the surgical tool (Claim 2). Glassman does not teach the correction of the surgical tool trajectory, only to stop the robotic arm when movement is detected. However, Schweikard teaches tracking patient motion and correcting the surgical tool (Col. 3, Line 29-35) relative to the patient based on the detected movement (Col. 7, Line 57-63, Claim 23, 32 & 36-37) in order to greatly improve the efficacy of treatment (Col. 7, Line 8-11). It would have been obvious to one of ordinary skill in the art to modify the system of Glassman to include the patient motion correcting system of Schweikard in order to greatly improve the efficacy of treatment (Col. 7, Line 8-11). Glassman teaches using an image capture second instrument to construct an image of the target site that is

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defined by reference to the image coordinate system (Figure 1, Element 28 & 52) and correlating the image coordinate system with an instrument coordinate system to place the target site coordinate in the instrument coordinate system (Figure 1, Element 38).

***Response to Amendment***

3. The Declaration filed on 01/02/2009 under 37 C.F.R. § 1.131 has been considered but is ineffective to overcome the Schweikard et al. (US Patent No. 6,144,875) reference. The Examiner extensively reviewed the submitted Declaration. The Examiner asserts the evidence submitted is sufficient to establish a conception of the invention prior to the effective date of the Schweikard reference. However, the Examiner contends the evidence submitted is insufficient to meet the requirements as stated in 37 C.F.R. § 1.131 (b) printed herein for reference:

*The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice or to the filing of the application. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence must be satisfactorily explained.*

As mentioned above, the Applicant has established conception prior to the effective filing date, but has not shown evidence of constructive reduction to practice by that date. Instead the Applicant merely states, "We were working on reducing the robotic arm and the optical system and other elements of the claimed inventions to practice over that entire period and beyond, continuing past the February 25, 2000 filing date of Provisional Application 60/185,036". A statement of this sort must refer to particular facts, not just be a general assertion. Further the statement and similar statements

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through the Declaration implies that constructive reduction to practice never occurred before the effective filing date of the provisional application. The Examiner notes there is confusion with regards to if the Applicant intends to show conception with constructive reduction to practice before the effective filing date of the prior art or the Applicant is trying to show conception with due diligence. The showing of facts need to be such to establish evidence for conception of the invention and evidence for the constructive reduction to practice before the effective filing date of the prior art application or evidence for conception and evidence showing due diligence until the actual reduction to practice [in this case the provisional filing date] (MPEP 715 [R-3]).

### ***Response to Arguments***

4. Applicant's arguments, see Page 10, filed 01/02/2009, with respect to the Double Patenting Rejection have been fully considered and are persuasive. The Double Patenting Rejection of Claims 10, 13-14 and 17-19 has been withdrawn.

5. Applicant's arguments filed 01/02/2009 have been fully considered but they are not persuasive. The Applicant submitted a Declaration under 37 C.F.R. § 1.131 swearing behind Schweikard et al. (US Patent No. 6,144,875) however the Declaration is insufficient. The rejection of Claims 1-22 is hereby maintained and newly added Claims 22-29 are also rejected.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE BOR whose telephone number is (571)272-2947. The examiner can normally be reached on M-T 8:30am-6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B./  
Examiner, Art Unit 3768

/Eric F Winakur/  
Primary Examiner, Art Unit 3768